

CLAIMS

1. Fine adjusting device for a sprung balance, formed of a balance (1) provided with poising screws (2a, 2b), pivoted between a plate and a balance cock (10) supporting an index (20), and a balance spring (4), by means of poising screws (2a, 2b) and tightening devices provided at the balance cock (10) and the index (20), characterised in that the balance cock (10) is provided with a first lug (11) comprising a first device tightening the end of the balance spring (4), said device being formed by a clamp comprising a fixed arm in the shape of a stirrup (12) extending said lug (11) perpendicularly and in which there is hinged an L-shaped rocking element (13) that can be manoeuvred by a flanged screw (19), in that the index (20) is provided with an extension (21) comprising a second device (22, 23) tightening the outer curve (4a) of the balance spring (4), said device being identical to the first and able to be manoeuvred by a flanged screw (29), and in that the balance cock (10) is provided with a second lug (30) comprising a third tightening device formed by a screw (9) screwed into said lug (30) through an oblong aperture (32) of an annular extension (31) of the index (20) to lock said index in a determined position, the three screws (9, 19, 29) enabling a fine adjustment to be carried out.

2. Fine adjusting device for a sprung balance, formed of a balance (1) provided with poising screws (2a, 2b), pivoted between a plate and a balance cock (10) supporting an index (20), and a balance spring (4), by means of poising screws (2a, 2b) and tightening devices provided at the balance cock (10) and the index (20), characterised in that the index (20) is provided with a first lug (21) in which there is fixed a first device tightening the outer-curve (4a) of the balance spring (4), said device being formed by a vise comprising a fixed jaw (35) secured to the first lug (21) and a mobile jaw (33) that can be manoeuvred by a conical head screw (39), and in that the balance cock (10) is provided with a second device (43, 45) for tightening the end of the balance spring (4), said device being identical to the first and fixed in a plate (47) secured to the balance cock (10) and able to be manoeuvred by a conical head screw (49) and in that the balance cock (10) is provided with a second lug (30) including a third tightening device formed by a screw (9) screwed into said lug (30) through an oblong aperture (32) of an annular extension (31) of the index (20) to lock said index in a determined position, the three screws (9, 39, 49) enabling a fine adjustment to be carried out.

3. Adjusting device according to claim 1, characterised in that each rocking element (13, 23) is formed by a large arm (15, 25) and a small L-shaped arm (14, 24) including a notch (14a, 24a) delimited by a top lip (16, 26) and a bottom lip (18, 28), in

which the flange of the associated screw (19, 29) engages to open or close the clamp formed by the stirrup (12, 22) and the large arm (15, 25).

4. Adjusting device according to claim 3, characterised in that the top lip (16, 26) of the L-shaped rocking element (13, 23) includes a plane (16a, 26a) inclined towards the notch (14a, 24a) cooperating with a corresponding inclined plane (19a, 29a) of the flange of a tightening screw (19, 29) to open the clamp by being unscrewed.
5. Adjusting device according to claim 3, characterised in that the bottom lip (18, 28) of the L-shaped rocking element (13, 23) is longer than the top lip (16, 26) and extends under the flange of a tightening screw (19, 29) to close the jaw by being screwed in.
6. Adjusting device according to claim 1, characterised in that the large arm (15, 25) of an L-shaped rocking element (13, 23) ends in a shoe (17, 27) the ends of which abut against the base of the stirrup (12, 22) while having a curvature corresponding to that of the outer curve (4a) of the balance spring (4).
7. Adjusting device according to claims 1 or 2, characterised in that the poising screws (2a, 2b) of the balance (1) have a cylindrical head with a cut face.
8. Adjusting device according to claims 1 or 2, characterised in that the index (20) is further provided with an index tail (20a) able to be manoeuvred by a screw (7) against the force of a return spring (8).